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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 14 1931

Not for publication without
prior consent of this division.

REPORT FOR THE PERIOD APRIL 1 - 14, 1934.

HAVRE:

The week was favorable for field work. Although the wind velocity was rather high on the 8th, 9th, and 13th, there was not a great deal of soil blowing. On the 13th, the north wind caused some of the strips in the commercial fields to move but not seriously. Winter rye has made a nice start. Winter wheat is also starting well and present prospects are for excellent stands. Weeds have started. Wild gooseberries and currants are showing leaf and lilacs are starting to burst. The plot field is about ready for the principal seedings. Quite a lot of miscellaneous seeding has been done, including grain hays and methods of fallow. Work has just started on large fields. Irrigated hay lands are being irrigated. There seems to have been very little winterkilling of alfalfa in the station fields. F.E.R.A. labor has replaced C.W.A. labor on the station, and a cattle shed is being built mostly for use of calves. Director F. B. Linfield was a station visitor on the 12th.

Maximum temperature, 73°; minimum, 27°; precipitation, none.

JUDITH BASIN:

With the exception of snow on April 1 and 2, the weather the past two weeks has been very mild and spring like. Snow melted and the ground became dry enough to resume field work April 7. All seed bed preparation work has been completed and, weather permitting, seeding will be done next week. Winter wheat and rye are making a good growth, and their condition is above average for this date. Some damage has been reported from army cutworms. Cattle were turned on crested wheatgrass pasture during the week. H. E. Tower who has been in charge of the forage work at the station during the past five years has resigned to enter the Soil Erosion Service of the Department of the Interior.

Maximum temperature, 73°; minimum, 16°; precipitation, 0.23 inch.

HUNTLEY:

The first two weeks of April have been comparatively warm, dry, and windy. One light shower and snow early in the month was the only measurable precipitation received, and field work has been possible almost every day. Seedbed preparation for early crops was completed, and all small grains and grasses were planted during this period. Alfalfa plots and perennial pastures were cultivated with the spring-tooth harrow, as were also some of the roads that were beginning to get weedy. Plowing for corn and sorgo was started. Winter wheat and rye have made a very good growth, but moisture will be needed before long if the present rate of development is maintained. Army cutworms continue to be numerous over the station fields, but so far have confined their feeding to weed patches rather than to the sown crops. Early, extensive damage to commercial fields reported by farmers as having been due to cutworms appears to be largely overcome through subsequent growth of the crops, although in a few places actual thinning of the stand is evident.

Maximum temperature, 80°; minimum, 21°; precipitation, 0.27 inch.

SHERIDAN:

Rotation plots plowed in March were harrowed twice with the harrow heavily weighted on the 2nd, at just about the right stage of drying for the plowing to work up in better condition than has been possible for spring plowing in the rotations here for several years. Snow on the following three days prevented any further field work until the 9th, when work was possible again on light soil. Odd pieces of ground next the ravine crossing the north side of the station were worked up and sown to alfalfa, to straighten out the meadow there in each field, instead of jogging the meadow for each series. Field I was prepared and sown to barley. The rotation field still remained quite soft and no further work was attempted there until the 13th, when preparation for seeding small grain was nearly completed except for a final harrowing just before staking the plots. Some other small blocks also were prepared and seeded to barley, oats, and wheat. The second date of seeding small grains was sown the 10th. A seeding of barley and spring wheat made February 16 emerged before the snow and made a rapid growth the past week, the growth now being heavier than with fall seedings. A seeding of garden peas and lettuce made on the same day, but on a heavier soil, emerged the past week. Vegetation generally made a rapid growth. Weeds and volunteer grain made necessary deeper surface cultivation with the disk and duckfoot cultivator on fall plowing and stubble land than usual. Soil samples taken at random showed moisture to a depth of about 16 inches on both stubble land and sod.

Maximum temperature, 75°; minimum, 21°; precipitation, 2.27 inches.

DICKINSON: (Report for the week ending April 14, 1934)

The winter was mild with light precipitation. The ground was bare of snow about half of the time, but the winter was not so severe on vegetation as some others recently. In both January and February the mean temperature was nearly 10° above normal. Precipitation in February amounted to only 0.05 inch, and the State average of only 0.06 inch was the lowest in the climatological history of the State for any month. An inch of rain and snow during the last week of March and the first week of April wet the surface soil enough to greatly improve conditions for spring work. Tillage on the plots was started April 6. A good seed bed was prepared on all methods except fall plowing. The large clods turned up in the fall were not wet all winter and were not broken by the disk and harrow. Plots in stubble over winter worked better than any other and now contain more water than other methods except fallow. Barley and field peas were seeded April 10, wheat on the 11th, and oats on the 12th. Barley was seeded on the 13th on a block of corn ground where pasture seedings will be made after the barley comes up. This method is being used to attempt better control of weeds and erosion, which in the past two dry seasons have reduced the stands of pasture plants. Winter wheat, although it seems to have been naturally "iarovised", appears to be about ready for reseeding to spring wheat. Because of the dry soil planting was delayed until October. It then germinated slowly but did not emerge. On March 27 it was just emerging, while winter rye planted on the same date was 2 to 3 inches high. Winds and dry weather during the past week have weakened the wheat plants so that unless wet weather comes soon it will not survive. Grasses and pastures have started slowly and are behind a year ago. Crested wheatgrass is well ahead of other grasses. Plots in the 1922 and 1923 seedings of crested wheatgrass were worked on April 6 with the duckfoot cultivator equipped with narrow spring-tooth shovels. This dug up about half of the sod and may improve the yield, as the stand had become too thick. Visitors included George Baker, and Mr. Fox of the North Dakota Agricultural College. Precipitation April 1 - 14, inclusive, 0.65 inch.

Maximum temperature, 72°; minimum, 22°; precipitation, 0.04 inch.

MANDAN: (Report for the week ending April 14, 1934.)

Agronomy - Field work was started in the rotations early in the week but has been delayed by high winds. The soil seems to be in the worst blow condition that can be recalled. It is so dry that cultivation does not leave it in a lumpy condition. High winds prevailed on two days of the week, and it is blowing hard again to-day. The wind blew steadily for 36 hours on the 10th and 11th. During the day it averaged about 25 miles per hour. Crested wheatgrass has made a good start, and fields of it are showing a good deal of green. No precipitation of value fell in this area during the week. Maximum temperature, 64°; minimum, 23°; precipitation, none.

Arboriculture - Tree seeds of Siberian pea tree, chokecherry, green ash, Russian olive, boxelder, hackberry, buckthorn, and buffaloberry, were planted the latter part of March. The soil was extremely dry at that time and considerable difficulty was experienced in working it down to suitable condition for planting. The later precipitation should help considerably in germination. Conifer stock was dug on April 9 and shipped the two following days. Much of the stock had "browned" considerably in the two previous weeks and all is in weak condition. The shipping of hardwood stock commenced on April 12 and is in progress at the present time. All chokecherry stock has been so badly infected by "damping-off" in the heeling-in bed that it had to be discarded. Several other species also show more or less infection.

Horticulture - Dry weather continues, and present indications are that considerable winterkilling or drying out will take place. Heavy rains would be of great benefit to fruit plantings. Work during the week included pruning fruit trees, planting in the nursery and field, and cultivating orchards and fallowed fields to prevent soil blowing. Cuttings were planted in the nursery.

BELLE FOURCHE:

A heavy, wet, snow averaging 14 inches in depth, was received April 2 and 3, and a total of 1.33 inches precipitation was recorded during the two-day storm. Only a small amount of run-off occurred as the snow melted, and the soil is well filled with moisture to a depth of at least 1 foot. Warm, windy weather has prevailed throughout most of the past week, and the soil was sufficiently dry to permit the commencement of plowing on April 10. Field work has consisted of plowing, disking, duckfooting, and harrowing in preparation for seeding small grain on rotation plots. Fall grain has again resumed growth, and the survival of winter wheat and rye on the various plots will apparently be much greater than previously anticipated. Bromegrass fields, native pastures, and lawns are becoming quite green, and all early shrubs and trees are budding.

Maximum temperature, 70°; minimum, 13°; precipitation, 1.33 inches.

ARCHER:

During the period April 1 - 14 the weather was quite spring-like except for a cold snap during April 4. Snow fell during April 2 and 3. The precipitation for this period totaled 0.41 inch. The snow did not drift much but covered the ground fairly evenly. This added moisture caused the soil to work well. At this time preparations are under way for the seeding of spring cereals. Duckfooting the rotation plots will be finished to-day. The dates-of-seeding of March 15 have emerged with good stands. The winter cereals in this section are in better shape than they have been for a number of years. The grasses are making good growth. Some of the shrubs are coming into leaf. Work during the first half of April consisted of tillage operations, tree planting, machinery repairing, and the preparation of seed for spring seeding.

Director W. L. Quayle and Vance Johnson, State Highway Department, were station visitors April 12. Maximum temperature, 68°; minimum, 19°; precipitation, 0.42 inch.

NORTH PLATTE:

April to date has been dry and windy with temperatures about normal. The only measurable precipitation was on the 4th and 5th with a record of only 0.28 inch. The lowest temperature was 21° on the 13th, and the highest 81° on the 9th. Spring wheat emerged to good stands on the 5th, and oats and barley on the 9th and 10th. Winter wheat on cropped land looks less promising than on the 1st of the month, but it is not permanently injured and will revive if rains are received within a reasonable time. On fallow, the growth is very profuse. The annual Smith-Hughes judging contests were held at the station April 12 - 13. There were 15 schools in attendance with 180 boys enrolled.

AKRON:

Weather has been unusually warm, and winter wheat has practically reached the jointing stage. Where not jointed, winter wheat has an upright, stringy appearance. There is considerable evidence that the wheat growth since March 10 has about exhausted the available soil moisture. There are, however, very excellent stands of winter wheat on practically every type of soil preparation. There are well emerged stands of spring wheat and barley, but as yet only partially emerged stands of oats on corn land preparation. Spring grain nursery seeding, plot trimming, and duckfoot cultivating roadways has held attention the past two weeks. The Sixth Annual Feeders' Day was held at this station last Thursday with about 150 present in the forenoon. Visitors were present from points as wide apart as Elizabeth and Julesburg, Colo. Maximum temperature, 79°; minimum, 21°; precipitation, 0.17 inch.

COLBY:

The first half of April was mostly dry, rather warm, and somewhat windy. Some damage from soil blowing has resulted in wheat fields where the wheat did not come up until late in the fall or this spring. Greater damage was prevented by an unusually heavy growth of wheat on most fields. Winter wheat, with the exception of that which came up very late, is badly in need of rain, even on summer fallow. The continuously cropped plots are wilting and drying badly. The fallow plots are turning a dark green generally and are drying in spots. Soil samples show moisture down to a depth of 18 inches on the continuously cropped plots and 4 feet on fallow. The top 6 inches are fairly dry on all plots. The available moisture in the first foot, even on fallow is very scant. The MC C winter wheat plot lost 8.6% in the first foot, 7.5% in the second foot, 5.0% in the third foot, and 1.3% in the fourth foot since seeding time last fall. Never in the history of this station has such a good prospect for a wheat crop practically run out of moisture so early in the season after considerable growth had started. Germination of the spring small grains was very slow, but they came up to good stands from April 9 to 11. Maximum temperature, 81°; minimum, 24°; precipitation, 0.16 inch.

GARDEN CITY:

Conditions over the southwestern part of Kansas are beginning to get serious. Very little precipitation has been recorded the past month. High winds over the entire area have caused considerable loss in wheat acreage due to soil blowing. In some areas as high as 50 per cent loss due to soil blowing is reported. In this county as reported April 1, the wheat crop was 70 per cent of normal. Since that date, however, this has been considerably reduced by the heavy growth and lack of rain. There has been no loss of small grains or damage due to soil blowing on the station. The

small grain plots are still alive, but some of them are showing extreme effects of the continued dry spell. Winter rye is showing the least resistance this year. Oats, barley, and spring wheat, which were seeded on March 22, were emerged to good stands by April 9. Flax was seeded on April 9 and is just beginning to emerge. Field operations have consisted of plowing the early spring plowed plots, cleaning fallow plots with rod weeder, trimming wheat and other small grain plots, soil sampling, listing and early spring cultivation of necessary plots. Irrigation work on the State project is in full swing at this time.

Maximum temperature, 86°; minimum, 28°; precipitation, 0.07 inch.

HAYS:

All wheat of normal stand except on fallow is being markedly checked in growth and some of it appears to be dying. The foliage is brown but very few of the plants are actually dead. On many of the plots the moisture in the first three feet has been reduced to or below the wilting coefficient. In some plots there is a small amount of moisture in the 5th and 6th feet, but there has not within the last year been sufficient moisture in the third or fourth foot to permit the roots to go through this layer, hence the moisture in the lower soil is of no use to the plants. With the subsoil dry a normal yield cannot be expected without good rains soon, followed by timely rains the remainder of the season. Wheat on fallow ground is not making normal growth, but it is still safe. All spring sown grains are in good condition.

Maximum temperature, 85°; minimum, 21°; precipitation, 0.08 inch.

DALHART:

Wind and soil blowing were as bad the first few days of the month as they have been at any time. The past week was rather quiet with a minimum of soil movement. There has been no moisture in the immediate vicinity of the station. The apricot trees tried to bloom the last of March, but there was insufficient moisture to give full petal emergence. The hybrid plums are in bloom now, and a few cherry trees are starting to bloom. Unless moisture comes soon it is felt that many of the trees which suffered severely from drought last year cannot live. Leaf emergence is just starting on the Chinese elms. Those in dry locations are not starting leaf emergence. Maximum temperature, 86°; minimum, 32°; precipitation, trace.

TUCUMCARI:

Temperatures the past two weeks were unseasonably high, with comparatively low wind velocity. The last frost occurred late in March. Fruit trees are in bloom or just through blooming, with the only frost injury to date being on peach trees which bloomed the latter part of March. Chinese elms (U. pumilla) apparently are going to produce some seed for the first time in the history of the station. The majority of seed pods, however, are empty, due to late March frost injury or drought or both. No field work has been started in this locality. Precipitation since September 1 totals 1.60 inches, and the total since December 1 is only 0.23 inch. Fortunately, wind velocity has been low this winter and spring, so blowing has not been serious. However, fields are too dry to permit shallow cultivation and are in ideal blow condition, so if winds increase it will be necessary to attempt listing to prevent soil movement. C.V.Theis, geologist with the Geological Survey, stationed at Portales, has spent the past two days at the station, conferring on problems in connection with the drilling of a station well. Maximum temperature, 86°; minimum, 32°; precipitation, none.

BIG SPRING:

A good rain totaling 1.05 inches April 7 fell slowly with no run-off. Temperatures have been rather erratic, but for the most part they have been rather cool. Weeds are coming fast since the rain. Prospects are for a fairly good fruit crop this year, something that this section has not had in several years. Peaches, apricots, and plums are now setting on in good shape. There is still a rather remote chance for a late freeze. The mesquite trees are budding now, and it is said that they seldom if ever get killed by a late spring freeze. Many farmers have been planting cotton and feed during the past week. The soil is so cold that it is probable that very poor stands will result. Station work has consisted of knifing beds and relisting some feed land. Other work has consisted of trimming wheat plots and plowing fallows.

Maximum temperature, 94°; minimum, 38°; precipitation, 1.05 inches.

LAWTON:

Temperatures during the period April 1 to 15 varied from a minimum of 35° on the 12th to a maximum of 92° on the 10th. The wind velocity was about normal, with the exception of a few days. On the 11th the hourly average was about 25 miles during most of the daylight period. Wheat has made a rapid growth during the past two weeks and shows the need of moisture in many places. Spring seeded oats and spring barley are making satisfactory growth, and fall or winter seeded oats, where not pastured, are pretty well headed. Corn planted March 29 emerged to good stands by April 10. The March 15 seedings of alfalfa and sweet clover are growing nicely. Old seedings of alfalfa show an acute need of moisture, as does much of the native grass land. The first date planting of cotton including nine varieties was made April 14 on a seed bed that contained but little surface moisture. No precipitation has been recorded this month. The southwestern part of the State, with the exception of a few localities, is complaining of dry weather. The central and northern part of the State appears to be well supplied with moisture. Green bug injury to small grains is very noticeable in a few northern counties, but the area of heavy injury appears to be restricted.

WOODWARD: (Report for the week ending April 7, 1934)

Spring is opening very auspiciously. Over the past week, deliberate showers with no run-off have amounted to 1.69 inches, and over the past two weeks, precipitation has totaled 3.03 inches. As a result of moisture, wheat has made a most remarkable growth. Peach blossoms have not as yet been killed, so everyone is hopeful of a peach crop. Chinese elm seed is apparently the only tree seed that has been killed so far. Work of the week has consisted largely of planting in the nursery. Because there have been no setbacks of cold weather, this work is far ahead of any possible labor force not too large and unwieldy to handle it efficiently.

Maximum temperature, 80°; minimum, 37°.

WOODWARD: (Report for the week ending April 14, 1934)

The past week has been characterized by good growing weather, with two very warm days, one with a high wind when blossoms opened from the bud and withered before night. Wheat has made remarkably rapid growth. There has been a steady stream of farmers coming to the Station for grain sorghum seed, but the acreage planted this year will not be great, since most of the land is planted to wheat, which at present is very promising. Cotton and broomcorn acreages will likely be increased because they are cash crops. The grain sorghums are likely to be a slow sale at low prices. Here where a large tonnage of sorghum feed can be grown at little expense, farmers seem often and generally short of feed, relying on wheat pasture

and sorghum roughness scattered over the fields. All fruit buds are still alive, so unless a freeze occurs during the coming few days, a crop of peaches, apricots, plums, cherries, grapes, and apples is practically assured. The last full fruit crop was in 1915. Nursery stock has proceeded from dormancy to full leaf more rapidly than in any previous year. Although an unusually large crew has been at work, much material that should have been transplanted cannot be, because too far advanced. Corn was planted during the week, and most of the wheat and oats planted over fields and orchards to prevent blowing was destroyed by discing.

Maximum temperature, 91°; minimum, 39°; precipitation, none.

PENDLETON:

The first two weeks in April were ideal for all field work. A large number of farmers have completed their spring plowing for fallow. Some land near the foothills of the Blue Mountains remains unplowed. Near the completion of the plowing many farmers complained of the soil being too dry to plow good, this was due to lack of rain and an excessive volunteer growth. Apparently times are getting better in this section, 50 new Diesel tractors were delivered in this county during February and March. Work on the station is at least one month ahead of the normal schedule. The Pendleton Grain Growers Auxillary held a meeting at the station on the afternoon of the 9th. A representative group of women interested in trees, shrubbery, and flowers were in attendance.

Maximum temperature, 80°; minimum, 26°; precipitation, 0.22 inch.

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REPORT FOR THE WEEK ENDING APRIL 21, 1934.

HAVRE:

Even though the minimum temperatures were freezing or below on six of the past seven days, conditions were very favorable for field work, and owing to fairly high maximum temperatures, vegetation has made some progress. Winter grains are growing nicely and early seeded spring grains have emerged. Native grass made slow progress due to a lack of showers. Domestic grasses are growing fairly well and alfalfa has started. Varieti s and most of the grain hays were seeded. Feed grains were seeded in the larger fields. Irrigation of alfalfa was completed. Fair progress was made on the cattle shed being built with emergency labor.

Maximum temperature, 79°; minimum, 19°; precipitation, none.

JUDITH BASIN:

Fair weather enabled the completion of most seedings of small grains and forages. Only a few miscellaneous items remain to be planted. High winds the forepart of the week dried out the surface soil and caused soil drifting in some fields. Winter wheat and grasses made a fair growth during the week, but moisture is needed for all crops. Replacement of shelter-belt trees was made. Cattle were turned on the experimental bromegrass and crested wheat-grass pastures April 20. With the present dry weather it is difficult to predict when it will be possible to pasture native grass. Director Linfield visited the station April 13.

Maximum temperature, 75°; minimum, 16°; precipitation, none.

HUNTLEY:

Continued dry weather is causing some concern among local farmers and livestock men. Winter wheat and rye are beginning to look a little dry in some fields. Range grasses and cultivated pastures appear to have made less progress during the last week than was noted earlier in the month. Alfalfa is also starting slowly. Spring sown small grains are beginning to emerge on the Dry Land plots but it is yet too early to determine what the stands will be. Preparation of land for corn and other late crops has gone forward, and all remaining stubble land in the miscellaneous field has been cultivated with the duckfoot. Some leveling has been done on tracts to be sown to alfalfa. Maximum temperature, 76°;minimum,18°;precipitation, none.

SHERIDAN:

Fair weather continued over the entire week, with temperatures about average for the season. Wind movement generally was light, but there were a few short periods of high winds with some soil blowing. Seeding of all crops generally sown early was completed. Corn ground was disked for flax, and some fall plowing for later crops was duck-footed. Cultivation of the shelter belt with the spring-tooth harrow was partly completed. Some replacements of conifers were planted.

Maximum temperature, 70°; minimum, 21°; precipitation, none.

DICKINSON:

Dry, windy weather with normal temperatures prevailed. Field work was possible all week but was delayed some by high winds on five days. Soil blowing occurred on corn ground and fallow. The orchard and bare unplanted fields were worked with a duck-foot cultivator to aid in control of blowing.

Increase fields of Steigum barley and Victory oats were seeded. Some apples, crabs, and plums were received and planted. Some evergreen trees were transplanted. Pruning of orchard and shelterbelt trees was completed. Most of the winter wheat plots on the rotations were reseeded to spring wheat.

Maximum temperature, 69°; minimum, 18°; precipitation, 0.05 inch.

MANDAN:

Agronomy: High winds and drought continued throughout the week. The wind blew hard on three days and is blowing again to-day. Soil blowing took place to a serious extent. The soil is in the worst blow condition during the history of the station. Ordinary cultivation is of little value in stopping soil drifting, as the soil is so dry that it works up in a fine and loose condition. Wheat and oats were seeded on the 18th. This is the average date of wheat seeding and two days earlier than the average date of seeding oats. Barley is being seeded to-day, the 21st. Crested wheatgrass and bromegrass are making a slow growth, and alfalfa has made practically no growth. There has not been over 0.67 inch of precipitation received in any 48-hour period since October, 1932.

Maximum temperature, 64°; minimum, 22°; precipitation, 0.04 inch.

Horticulture: Winds have caused considerable blowing of the dry soil, making it necessary to cultivate all orchards and bare ground much earlier than usual. It is feared that severe killing back of fruit trees will take place unless rains soon come. Mulch was hauled from fruit trees, strawberries, and seed beds. In some places it had been covered with blown sand, making it difficult to remove. Raspberries, grapes, and budded nursery stock were uncovered during the week. Pruning is still in progress.

Arboriculture: The shipping of shelter-belt nursery stock was completed during the week. Northwest poplar cuttings have been planted, and a number of small American elm seedlings have been lined out in nursery rows. Spruce and pine seedlings have been planted as replacements in various young plantings on the station. One-year nursery seedlings have been cultivated on a number of the blocks and other test plantings. All types of trees are suffering severely from lack of moisture. Soil blowing has been extremely bad in many plantings during the week.

BELLE FOURCHE:

The weather during most of the week was comparatively cold, and strong winds prevailed nearly every day. There was only one night in which freezing temperatures were not recorded, and on three nights the temperature dropped to 25° or below. No precipitation was received, and the surface soil has dried very rapidly. Spring plowed soil has become too dry to permit the germination of grain sown on spring plowing, and satisfactory stands of shallow seeded crops will not be obtained on any of the various cultural treatments, except summer fallow, until after rain is received. Bromegrass, sweet clover, field peas, flax, and all small spring grains were seeded on the rotation plots during the week.

Maximum temperature, 71°; minimum, 17°; precipitation, none.

ARCHER:

The weather was cooler but mild during the past week. Snow and rain during the night of April 14 checked field work for a few days, but it was very opportune. Grasses have made an unusually early start. Grama-grass and buffalo-grass are sending up green shoots. This generally occurs about the middle of May. At present winter wheat and winter rye look very

promising. Crested wheatgrass and winter rye in the dairy field are ready for pasturing. Work at the station consisted of completing practically all tillage operations in the experimental field. Staking the rotation plots, preparatory to seeding, is in progress.

Maximum temperature, 62°; minimum, 27°; precipitation, 0.51 inch.

NORTH PLATTE:

The week has been cool and dry with high winds prevailing. Spring grains have made fair growth. Winter wheat except on fallow has continued to deteriorate. Injury has now progressed to a point where a full crop can hardly be expected even with a good supply of moisture from now on. Alfalfa and pastures are starting growth, but alfalfa is being held back somewhat by army cutworms. The pump irrigation plant has been in operation for several days watering alfalfa sod land in preparation for row crops.

Maximum temperature, 74°; minimum, 26°; precipitation, 0.02 inch.

AKRON:

The week has been open and favorable for field work, which has urgently demanded attention some two weeks earlier this spring than usual. Rotation roads have been duckfoot cultivated thus partially eliminating the vigorous winter wheat. The open dry weather has been very helpful in eliminating this over-grown winter wheat and winter rye from the cultural study roadways. Other work was the plowing of the cultural study cornland plots and the plowing of the winter wheat stubble land for the rate and spacing corn experiment. Still other work was the planting of shrubbery and clump junipers about the building site. Spring seeded small grains have emerged to satisfactory stands on all cultural preparations despite the lack of rainfall. The continued lack of rainfall is beginning to show in the sickly appearance of the early seeded winter wheat on corn-land and stubble soil preparation. That seeded on fallow is holding well and is jointing. Maximum temperature, 73°; minimum, 25°; precipitation, 0.08 inch.

COLBY:

This week started wet with 0.20 inch of moisture in the form of showers and a half inch of snow on the 15th. It has been dry since, however. The weather has been pleasant with not much wind. It has been warm in the day time, but freezing temperatures were recorded on four of the last seven days. Winter wheat continues in a very critical condition. It is wilting on all fields where there has been much growth, and in many of them, brownish, drying patches are getting bigger every day. Only the late wheat which has not been blown out appears to be in good condition. The spring grains are up but are making slow growth. There is not enough moisture near the surface to permit rapid growth.

Maximum temperature, 75°; minimum, 24°; precipitation, 0.20 inch; snow, ½-inch.

GARDEN CITY:

No precipitation of any consequence was recorded in this area during the past week. Winter wheat on the project is ranging from good to very poor. Even some of the supposedly better methods in the alternate seedbed experiment are showing up as poorly as the poorest. On these and several other methods, the wheat has made only a few inches growth over the past month, is a sickly pale green color, and is showing brown over a large portion of the plots. On the old field all methods show up better than on the annex field. The alternate-fallow wheat is growing very rapidly and has stooled until the stand is so thick that it tends to

lodge even with a heavy dew. Oats, barley, and spring wheat are showing up nicely and making good growth as yet. Flax has not come through to a good stand to this date, however, it is showing improvement. The recent light shower helped a little to bring it up but was not lasting enough. Winter wheat generally over the western part or rather southwestern part of Kansas is not any too promising. The fields are, however, showing the results of seedbed preparation. Maximum temperature, 78°; minimum, 30°; precipitation, 0.30 inch.

HAYS:

Light showers the first part of the week brought temporary relief to the winter wheat, but they were so small the relief ended with them, and the condition of the wheat is rapidly becoming serious on all cropped land where a normal stand was secured. It is drying up rapidly, and the yield possibility is already greatly reduced. Wheat on fallow is also yielding to drought, especially where the ground was cropped to sorghum previous to the one year of fallow. Winter rye is suffering extremely from drought, even more than the wheat. Spring small grains are all in good condition. The water requirement as yet has not become so great for these crops. Canada peas are also in good condition. The green bugs, which have added much damage to wheat in eastern Kansas, are showing up in some wheat fields near Hays. These fields look extremely unpromising. Drought is bad enough, but drought and bugs together is too much. At present there seems to be very few green bugs in the wheat on the Experiment Station fields, but enough for "seed". The commercial fields of alfalfa on the station, however, are badly infested with the green bugs, and although not seriously damaged, the first crop of alfalfa is in great danger of being destroyed by these insects.

TUCUMCARI:

Work has included cutting standing stalks, pruning trees and shrubs, and cleaning yards and grounds. Field work is not under way in this locality and will not be until rains are received. No frost has been received since late March and most orchard trees are well loaded with blooms. These trees, in addition to Redbud, flowering crabs, flowering peaches, and apricots have not presented such a mass of bloom in several years. The past week several local rains were reported within 100 miles of Tucumcari, some localities receiving an inch or more. The station total for the month to date remains a trace, for the year, 0.23 inch, and for the period since August 31, 1.60 inches. The past week has been warm, calm, and quite generally cloudy. Maximum temperature, 83°; minimum, 40°.

DALHART:

Three showers during the week furnished this immediate locality with the first spring moisture. These showers extended a few miles only from the station. The oats plots were seeded following the rains, and planting of replacements in the conifer planting was started. Cherry trees are blooming. There was no severe soil blowing on the station during the week. Maximum temperature, 73°; minimum, 38°; precipitation, 0.70 inch.

BIG SPRING:

Temperatures as a whole have remained cool during the past week with little or no wind movement. On April 18 and 19 there was a slow drizzling rain with no runoff. The station seemed to be on the edge of this rain, for many sections of the county reported 2 to 3 inches with some hail connected with it. Native pastures and wheat will be helped materially, but it will also cause many farmers to replant. This will

probably be a good thing, for the soil was too cold for seed germination before this. The April 15 date of cotton was planted as scheduled this week and lister beds were knifed. Other work has consisted of threshing milo for the cattle feeding work.

Maximum temperature, 90°; minimum, 48°; precipitation, 0.51 inch.

LAWTON:

A chill north wind, more or less prevalent since the precipitation of 0.42 inch on the 17th, resulted in a minimum temperature of 39° on the 20th. The weekly maximum temperature was 73°. Precipitation on the 17th covered the State quite generally, but in most instances, lightly. Wheat in the variety test ranges from 14 to 26 inches high. Early maturing varieties are pretty well booted and the others are in boot formation. Leaf rust has been quite prevalent, and in many instances the foliage shows considerable injury. Mediterranean selections T.S. 5933-23 and T.S. 3015-105-1 show a very high degree of resistance to leaf rust. Other varieties that may be designated as resistant are, Quivira, Kawvale, and Denton. Rotation plots of wheat are less growthy except on green manure, fallow, and manured fallow. Where good tillage has been practised in the preparation of the seed bed wheat appears to be vigorous and normal in growth. Winter barley is heading but is lacking in growth. A liberal supply of moisture will be necessary to overcome its present handicap and the very heavy infestation of chinch bugs that exists. Spring seedings of alfalfa and sweet clover are growing nicely, but old alfalfa needs additional moisture. The grain sorghum variety test was planted April 19, and the first date planting in the chinchbug resistance project was made on the 17th and 18th. Early Blackhull heads were beginning to break out of the boot on the 20th.

WOODWARD:

Monday was misty and rainy, but balance of week was ideal for field work with moderate temperatures and little wind. Wheat continues to grow rapidly and look well, but there is little moisture in the soil. Rye was apparently too far along to profit by spring rains and can make only a light crop. A set of all kinds of fruit is practically assured as there is little likelihood of frost hereafter. All of the flowering shrubs will bloom, but some of them not freely because drought of last summer limited the growth of new wood and the development of buds. The redbud especially had very scattering blossoms. Work of the week has consisted largely of planting cuttings and transplanting seedlings in the nursery.

Maximum temperature, 76°; minimum, 38°; precipitation, 0.39 inch.

PENDLETON:

Warm, dry weather such as we expect in June prevailed during the past week, with a maximum temperature of 85°. The prevailing wind was from the northeast, and a great deal of surface moisture was lost. The spring plowing for fallow is completed except the foothill lands. The early fall sown Federation wheat is beginning to head, Crested wheatgrass is heading, and Alaska garden peas are in bloom. The Crested wheatgrass in rows has made a greater growth this spring than in 6-inch drills. Two Smith-Hughes classes in Agriculture of the Pendleton High School visited the station on the 12th.

Maximum temperature, 85°; minimum, 32°; precipitation, 0.13 inch.

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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

APR 28 1934

Not for publication without
prior consent of this Division.

REPORT FOR THE WEEK ENDING APRIL 28, 1934.

HAVRE:

The past week was dry with no precipitation recorded since April 2. Most of the early seeding is up in good shape, and the rotation plots were all seeded during the week. Stands on spring plowing will undoubtedly be spotted until it rains. Grasses continue to make a fair growth, although the surface soil is beginning to dry out. Native grasses are growing quite well, although the growth would be much more rapid if there were a few showers. Both winter rye and winter wheat are growing very nicely. The native shrubs, including Juneberries, wild plums, and currants are beginning to bloom. The blooms are quite heavy but temperatures have been a little low during the week and it would seem that some of the blossoms would be injured. Plowing for summer fallow is practically completed on the plots and will be during the next week on the larger fields. Livestock generally are making very good progress.

Maximum temperature, 81°; minimum, 29°; precipitation, none.

JUDITH BASIN:

The weather continued fair and dry during the week. Wind movement was low, but the air was filled with dust particles from dust storms in adjoining States which at times almost obscured the sun. Crops made only fair progress during the week, and native grass and winter wheat are beginning to show the need of moisture. Trees and shrubs are slow to leaf. Plowing for corn on the rotations was completed. Other work consisted of trimming winter wheat plots, cultivating shelter belts, cultivating crested wheatgrass, and building fence.

Maximum temperature, 75°; minimum, 25°; precipitation, none.

HUNTLEY:

The April drought continued through last week. Unless rain is received within the next two days, this promises to be the second driest April in the history of the station. Winter wheat and rye appear to be holding their own but have made very little growth during the week. Spring sown grains have come up with good stands on most plots. The stands on stubbled-in plots are somewhat patchy. Field work has consisted of the preparation of land for corn, safflower, and alfalfa, and plowing up some plots of old alfalfa. Spring pigs were weighed and placed on the plot of winter rye in the annual-crop pasture rotation.

Maximum temperature, 76°; minimum, 29°; precipitation, none.

SHERIDAN:

Fair weather prevailed over the entire week with temperatures on most days somewhat above the average for the season. Dust from dust storms in other sections was quite heavy for a few days. Most vegetation made a fair growth over the week. Spring wheat and barley emerged in the rotations and varieties on the 27th. Oats on fallow in the rotations and varieties are partly emerged to-day. Plowing for corn and sorgo in the rotations was completed, and plowing in other fields is in progress. Sheep were weighed and placed on pasture. Duckfooting of all fall plowing not yet sown to any crop was completed.

Maximum temperature, 78°; minimum, 30°; precipitation, none.

DICKINSON:

Dry weather with normal temperatures continued through the week. Saturday and Sunday were very windy, and the worst dust storm of recent years developed on the afternoon of the 22nd. The soil has drifted so badly in some places that reseeding of parts of some fields will be necessary in the district. The soil is now too dry for a good job of plowing. Wheat and oats seeded April 11 and 12 are beginning to emerge on fallow and corn ground. The soil is so dry that full stands on other methods will not come up until after a rain. Cultivated grasses made fair growth considering the dry condition. Native pastures have not started, except on low places or on slopes where snow drifted. Feed is very scarce, and livestock generally is in poor condition. A truck load of plants, mostly bull pine and native cedar, was secured from the Badlands and planted about the grounds.

Maximum temperature, 80°; minimum, 19°; precipitation, none.

MANDAN: Agronomy -

Another week has passed without rain. The wind did not blow hard, except on the 22nd when a severe wind came up during the afternoon. The temperature reached a maximum of 80° about 3 o'clock, or about when the wind started. The air was so filled with dust that it was possible to see but a short distance. Oats and barley were seeded in the feed fields early in the week. Sweetclover, bromegrass, and peas were seeded in the rotations the forepart of the week. No seeding of crested wheatgrass has been attempted as the top soil is so dry that it is impossible to prepare a seed bed. An attempt has been made to clean up some of the drifted soil, caused by the wind storms of last week. Wheat is coming up on most plots in the rotations. The subsoil moisture is not so low as might be expected under the existing conditions. Crested wheatgrass is the only crop that is green at present. It is much ahead of bromegrass. Plowing for corn in some of the blocks was done during the week.

Maximum temperature, 80°; minimum, 19°; precipitation, none.

Arboriculture - Twelve pounds of Chinese elm seed purchased from Washington has been planted in the nursery. The lining out of evergreen stock in the transplant field commenced the middle of the week. The surface layers of the soil are so dry that it was almost impossible to make an open trench. The work was temporarily halted on Thursday for the purpose of irrigating the fields to prevent the dry dirt from falling in and filling the trench. This work is still in progress. All seeding stock is suffering severely from drought. Large evergreen trees are still "browning up" and dying.

Horticulture - Dry weather continues, and it now appears that injury to fruit trees will be severe. Many will probably die unless rain comes soon. Fruit trees were given their dormant spray on April 25 and 26. Lime sulphur and lead arsenate were used. Fruit trees were shipped to cooperators on April 27. The completion of planting has been postponed in the hope of obtaining more favorable planting conditions. Pruning has been completed, and men are engaged in clearing the fields of brush.

BELLE FOURCHE:

Clear, warm weather throughout the week has been favorable to plant growth, but strong winds have caused an excessive amount of evaporation and the soil is drying very rapidly. Crops will soon be suffering from lack of moisture unless rain is received. Small grains are beginning to some up on all cultural treatments, except spring plowing, but a limited amount of germination has taken place on spring plowed land. Satisfactory

stands of winter wheat and rye have finally developed on the various plots, but a large proportion of the grain apparently germinated this spring. Jackrabbits are exceptionally numerous and are continuing to do considerable damage to winter wheat. Rabbits destroyed much of the young alfalfa and sweet clover during the winter, necessitating reseeding of alfalfa and sweet clover plots this spring. Field work has consisted of plowing corn plots, and seeding alfalfa.

Maximum temperature, 78°; minimum, 29°; precipitation, none.

ARCHER:

During the past week the weather was dry and at times threatening. The total precipitation for April to date is 0.97 inch. From present indications the total precipitation for April will be about 56 per cent of the average. These conditions are causing plant growth to show the effects of drought. Winter wheat, winter rye, crested wheatgrass, and other plants showed signs of leaf rolling April 25 when the temperature reached 75°. Work at the station consisted of seeding the wheat, oats, barley, peas, sweet clover, and alfalfa on the rotation plots. Practically all the trees were cultivated, and the dairy fields are being duckfooted and one-wayed. The dairy shelter experiment was brought to a close April 26. Director W.L.Quayle was a station visitor April 24.

Maximum temperature, 75°; minimum, 28°; precipitation, 0.04 inch.

AKRON:

On Monday and Tuesday the sky was heavily overcast, indicating heavy dust storms. The week has been especially calm and free from wind movement for this season of the year. Thursday opened with a drizzling rain which persisted all day. The precipitation was 0.39 inch, which is very welcome but inadequate for the growing winter wheat. Shrubbery about the building foundations has broken into leaf during the week, and many of the summer birds have made their appearance. Plums in the orchard are fully in bloom by this week end. Work has consisted of plowing, duckfoot cultivating, hauling dirt to place around the foundation shrubbery, reconditioning screen doors and windows, and cultivating and hoeing the orchard.

Maximum temperature, 83°; minimum, 32°; precipitation, 0.39 inch.

NORTH PLATTE:

Field work consisted of preparing land for corn and planting the irrigated potato field. The irrigation pump has been in operation all week watering land where old alfalfa has been broken up for corn this season. The weather has continued dry and windy with no precipitation. Winter wheat is beginning to show the effects of the moisture shortage. On the D.L.A. project, it has been materially damaged on all rotations except the fallow, and if rain is not received soon, some of the plots will have succumbed entirely.

COLBY:

The weather continues dry and windy, very unfavorable to crops generally. Winter wheat continues to dry up, and some of it is getting to the stage where rain will not revive it. High winds prevailed most of the week. The air has been filled with dust, but there has not been much soil blowing in this locality. These winds are drying the soil considerably, even where there is no growing vegetation. The nights have been very cool. The spring plowing and listing for the sorghums and

corn were done this week, as were also the spring one-waying for corn and the preliminary tillage in the methods of fallow. There was not an abundance of moisture in any of the plots. Weeds were small and not very numerous. Maximum temperature, 82°; minimum, 32°; precipitation, none.

HAYS:

Extreme drought, high temperatures, frequent heavy wind, and dust laden sky describes the condition during the past week. Winter wheat on plots that grew a crop of wheat last year is burned brown and in extremely bad condition. April 28 prospects for wheat on the project probably have not been so poor since 1913. Rye is also burned brown. Both the wheat and rye on cropped land for most part are prostrate on the ground. Wheat on fallow is now slipping. Many of the heads are already formed and will be extremely short. The thin stand of wheat on row crop land, which until recently gave promise of no yields, is now in better condition than wheat on wheat land, due to the fact that the stand on row crop land is so thin and so backward it has not required much moisture this spring up to this time. However, such wheat will be very late and is too thin to produce average yield. Oats and barley are still in good condition. Alfalfa is so heavily infested with plant lice there is little chance for the first crop to make a satisfactory yield. This is especially true on commercial fields on the bottom land.

Maximum temperature, 79°; minimum, 33°; precipitation, none.

GARDEN CITY:

Another week without rain. Most of the week has been unusually windy, with a haze of dust in the air resembling a heavy fog. At one time the sky was clouded and it looked as if a rain might be near. There was a very slight mist which lasted only a few minutes. This windy spell lasted until Friday, when the day broke with a gentle breeze from the northeast and warmed up considerably. Saturday was warm with slightly higher wind velocity. Winter wheat is rapidly being thinned out by the continued dry weather. This condition is being hastened by the high prevailing winds. Some of the fallow plots of wheat are still looking promising, having a top growth of 12 to 14 inches maximum while others have from 6 to 8. On a few fallow plots the wheat is making a very poor showing. The worst condition prevails on the alternate seed-bed methods. On these plots the wheat has made very little headway and most of the plots are almost brown. It is doubtful if a good rain at this time would benefit these to any extent.

Maximum temperature, 82°; minimum, 33°; precipitation, none.

TUCUMCARI:

In spite of continued drought, trees are putting on leaves very determinedly, fruit trees have persisted in bearing a good crop of blooms, and native sod is showing traces of green, visible only upon close examination. Precipitation of 0.01 inch this week raised the total since the close of November to 0.24 inch. Work of the week included spring tooth harrowing all alfalfa, seeded in rows; extending sewer distribution line; watering nursery and lawn trees; and overhauling farm implements and cleaning grounds. Wind movement has not been high enough to make listing imperative, if possible, but nothing more in the way of surface cultivation to roughen the surface can be done. It is unlikely that listing could be performed, even if attempted. High wind would play havoc with all station fields at present, although soil movement to date has not been extensive. Soil moisture samples taken this week show

milo plots cropped in 1933 quite depleted of moisture.
Maximum temperature, 87°; minimum, 41°; precipitation, 0.01 inch.

DALHART:

The moisture which came the previous week was really gone by Tuesday of this week. This was especially noticeable as the station force was busy setting replacements in the conifer planting. Less than one day of tree planting remains. Planting was delayed until this late date because of the excessive soil movement earlier in the season. The total wind movement on Thursday of this week was the third highest for the year. This was followed by a shower Friday morning which totaled 0.11 inch. The truly remarkable part of the rainfall for the preceding week, although the total was only 0.70 inch, was the effect on the native vegetation. Last year the native grasses failed to start growth until the last week of August and then the growth was spotted. The past few days the native grass has greened up rather uniformly although thin. Farmers in this section of the Panhandle of Texas are a very discouraged group of people. The immediate prospect is indeed disheartening.
Maximum temperature, 82°; minimum, 37°; precipitation, 0.11 inch.

BIG SPRING:

Temperature as a whole have become somewhat higher during the past week. Heavy rains were reported in some sections of the county, but only a light shower was received at the station. Planting grain sorghums and cotton has been pretty general over the county during the week, although the soil is still cold. The April 15 date of planting of cotton varieties emerged April 26, but present a rather sickly appearance. The winter wheat plots are now heading, but they will require more rain before much of a crop can be matured. Station work this week has consisted of dusking the cooperative field, cultivating fallow plots, and knifing listed plots. Other work has consisted of planting a block of Sudan grass, cultivating the evergreen tree planting, and harrowing increase fields. Maximum temperature, 94°; minimum, 37°; precipitation, 0.05 inch.

LAWTON:

Precipitation of 0.55 inch April 24 to 26 was beneficial to small grains and materially assisted the preparation of seed beds for such row crops as sorghums and cotton. Subsoil moisture in small grain land is well depleted, and the crops are in need of a rain that will add a reserve to the lower root feeding depths. The April rainfall is about two inches below normal and the 0.97 inch received to date this month has been just enough to tide the crops along temporarily. Wheat, as a rule, is heading quite short and plant growth is subnormal. The heavy infestation of leaf rust that was so prevalent during the early spring growth may be responsible or partly so for the retarded plant development. Some sorghum planting was done on the station, and the work will likely be pretty well completed within the next few days. A few farmers have planted cotton, but as yet the temperatures have been too low for satisfactory emergence and subsequent growth. Such planting will in all probability, progress extensively shortly after the first of May. A. C. Cooley, Director of Agricultural Extension and Industry, Bureau of Indian Affairs and Dr.C.P.Blackwell, Director of the State Experiment Sta.,Stillwater, Okla., were visitors on the 25th.
Maximum temperature, 86°; minimum, 36°.

WOODWARD:

Over the past week there has been no rain, and it has been three weeks since rain of much consequence. Wheat is becoming very spotted and unpromising. Farmers coming in from over the county are very much discouraged over its condition. In some neighborhoods stock have been turned on to pasture it down, after which it will be disked up and fields planted to sorghums. The temperature reached 36° at the station the night of the 27th. In some places over the county there was frost. Work consisted of planting seedlings, cuttings, and seed in the nursery, cultivating nursery and windbreaks, and pruning and spraying orchard.

Maximum temperature, 84°; minimum, 36°; precipitation, none.

PENDLETON:

Weather was more favorable for crops than last week. One high temperature of 91° was recorded on the 22nd, since then our highest temperature has been 74°. The shallower and drier sections of the Columbia River Basin are in need of at least an inch of rain. On some of the shallow land the grain is beginning to "burn". Rainfall for the month is about an inch below the normal, precipitation to date for April is only 0.45 inch, in six widely scattered showers. The area in which the station is located can get along very nicely for a month without rain. On account of the extremely mild winter, the insect pests of fruit orchards, and truck and flower gardens have been far more troublesome than usual. The pea growers in this section are becoming concerned about the aphids on their peas. The aphids are even on the crested wheatgrass. The crested wheatgrass will be in full head in a few days. Winter wheat is heading rapidly on the station. Spring wheat is about 6 to 9 inches tall. Two Smith-Hughes classes in Agriculture visited the station on the 23rd and 26th. Thirty-nine grass plants from the Division of Forage Crops and Diseases greenhouses were received this week. Maximum temperature, 91°; minimum, 37°; precipitation, 0.10 inch.

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